
Water Acquisition and Management Subcommittee
Position Paper: New Mexico Rio Grande Compact Delivery and Credit Water

Introduction and Background

The Rio Grande Compact was signed by the states of Colorado, New Mexico and Texas on March 18, 1938. The Compact was subsequently ratified by the legislature of each state, enacted as Public Act No. 96 by the 76th Congress, and signed into law by the President on May 31, 1939. The schedule of deliveries and responsibilities of each state under the Compact became effective January 1, 1940.

The Compact is administered by the Rio Grande Compact Commission, which consists of a Commissioner from each of the three signatory states, plus a Federal representative appointed by the President who acts as Chairman of the Commission without vote. The Commission holds regularly scheduled meetings each year in the spring. Additional special meetings are held as necessary. Any deviation from the terms of the Compact, including those that govern water operations, requires unanimous approval from all three state Commissioners.

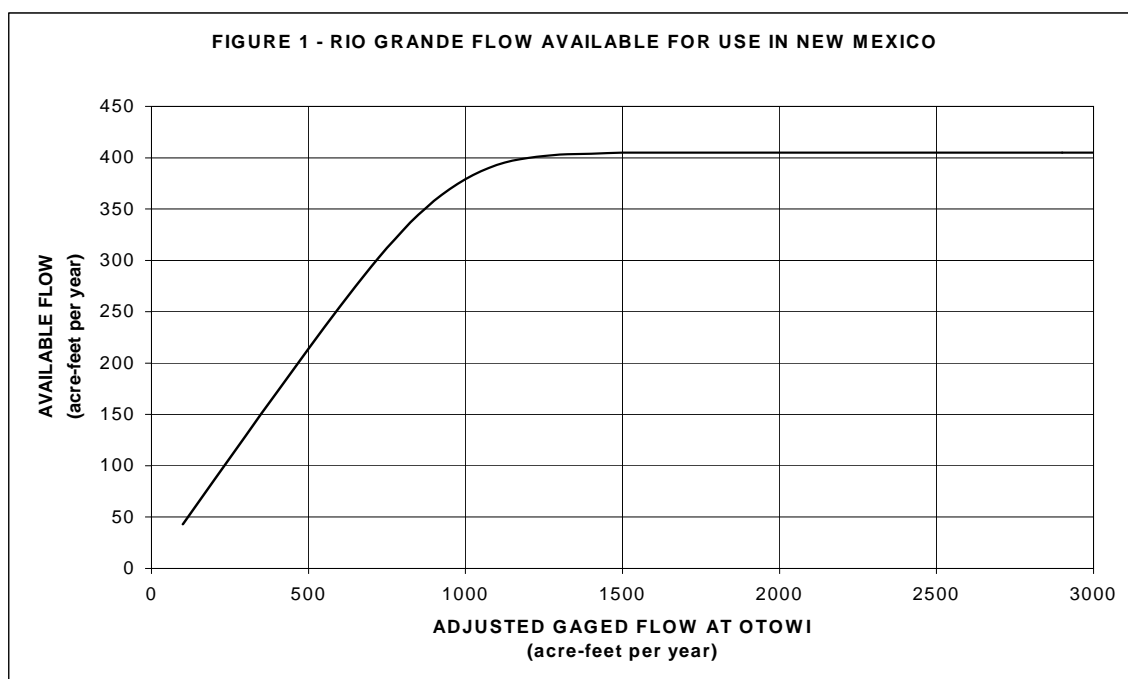
The three states signed the Compact after a lengthy period of study and negotiation. The purpose of the Compact was to equitably apportion the uses of the waters of the Rio Grande among the three states based on how that apportionment existed in 1929, thereby allowing each state to develop its water resources at will, subject only to the delivery obligations set forth in the Compact. Prior to the Compact, the use of the waters of the Rio Grande had been a source of much controversy between the three states for the preceding four decades.

Rio Grande Compact

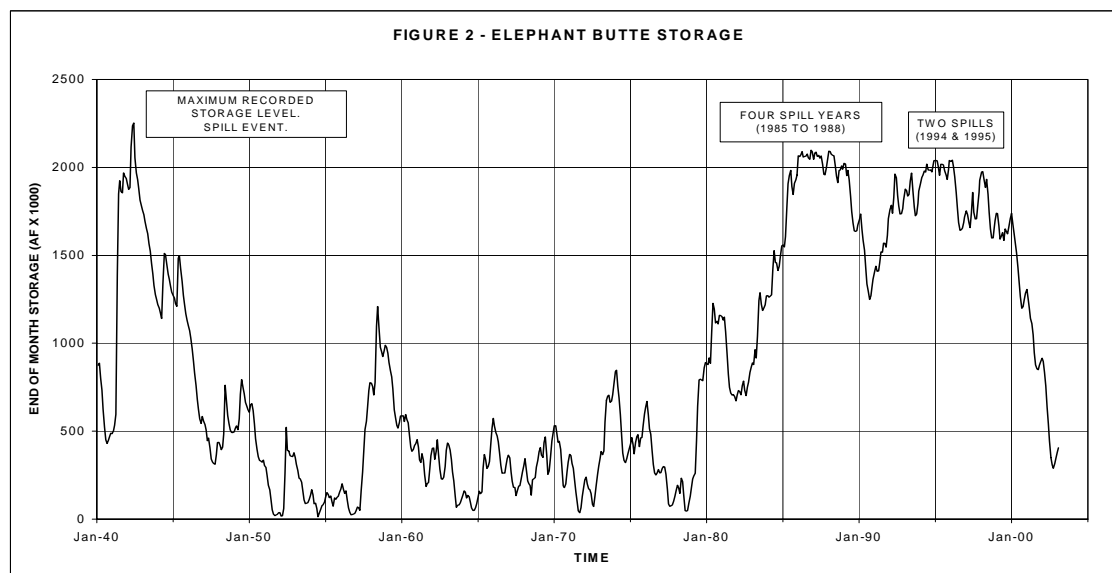
The Compact requires that the upper states of Colorado and New Mexico deliver a specified percentage of flow in the Rio Grande to the next lower state. These percentages are based on specified gaging stations and index schedules contained within the Compact. The percentage that New Mexico must deliver to Texas is based on the amount of annual runoff in the Rio Grande as measured at the Otowi gage, located on the Rio Grande a few miles south of Espanola. Pursuant to the Compact, adjustments to the gaged flow at Otowi are made to account for storage in upstream reservoirs and water diverted from the Colorado River basin into the Rio Grande basin in northern New Mexico by the San Juan-Chama Project. In dry years about 60 percent of the flow at Otowi must be delivered. In wet years, over 80 percent must be delivered. New Mexico's apportionment of the native flow in the Rio Grande at Otowi is capped at 405,000 acre-feet per year (AFY) as shown in Figure 1 below. New Mexico's deliveries are measured as the releases below Elephant Butte Dam plus the change in storage in the reservoir.

The Compact uses a system of debits and credits to account for annual over- or under- deliveries. In general, New Mexico may not under- deliver by more than 150,000 AF in any given year, nor accrue a debit of greater than 200,000 AF. The amount of credit that each state may accrue in any given year is capped at 150,000 AF. If Elephant Butte Reservoir fills up and overflows, a "spill" occurs. If a spill occurs when Colorado and New Mexico have accrued credits, these credits are reduced proportionally in an amount equal to the amount of the spill. If a spill occurs when Colorado and New Mexico have accrued debits, all of that accrued debit is cancelled.

Spills have occurred in seven years since the advent of the Compact – 1942, 1985, 1986, 1987, 1988, 1994 and 1995 (see Figure 2 below). Annual credits or debits for Colorado and New Mexico are not computed during years in which a spill occurs.



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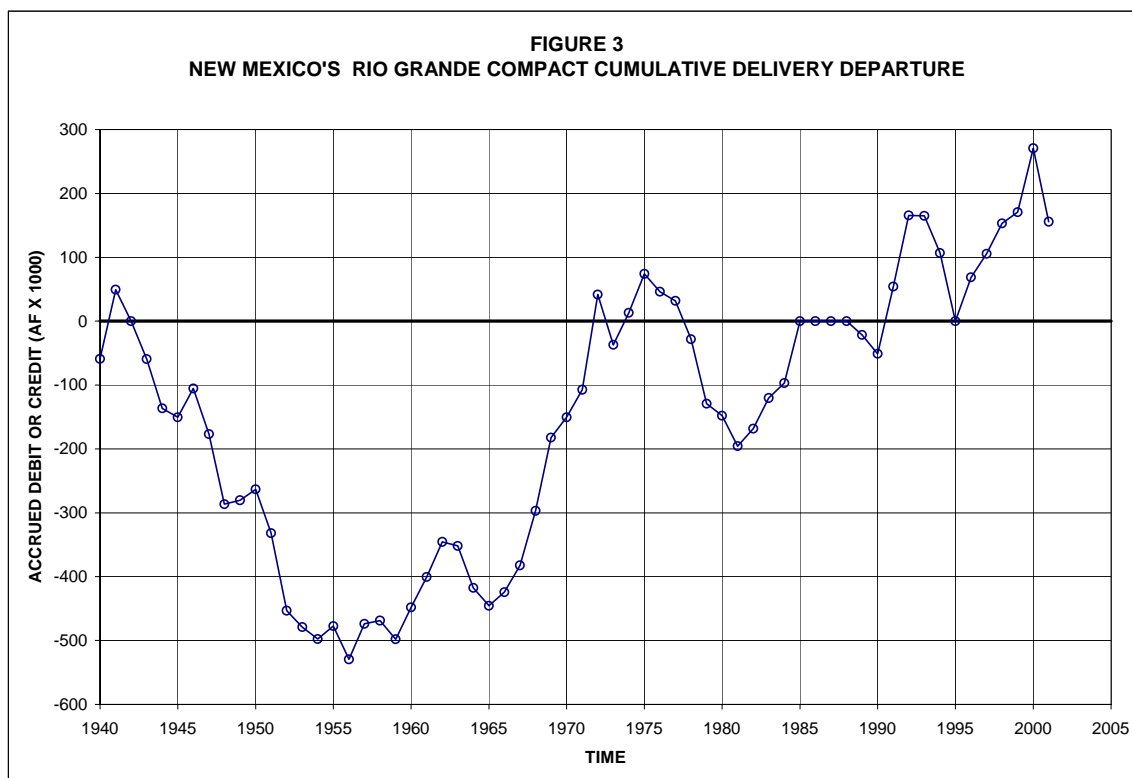


Other provisions in the Compact impact the operations of reservoirs built after 1929 in New Mexico and after 1937 in Colorado. Article VII of the Compact prohibits storage by New Mexico in those upstream reservoirs whenever Usable Water in Project Storage in Elephant

Butte and Caballo Reservoirs falls below 400,000 AF. In addition, when New Mexico has an accrued debit, it is required to store an amount of water equal to the extent of that accrued debit in post-1929 reservoirs.

New Mexico's Historical Compact Deliveries

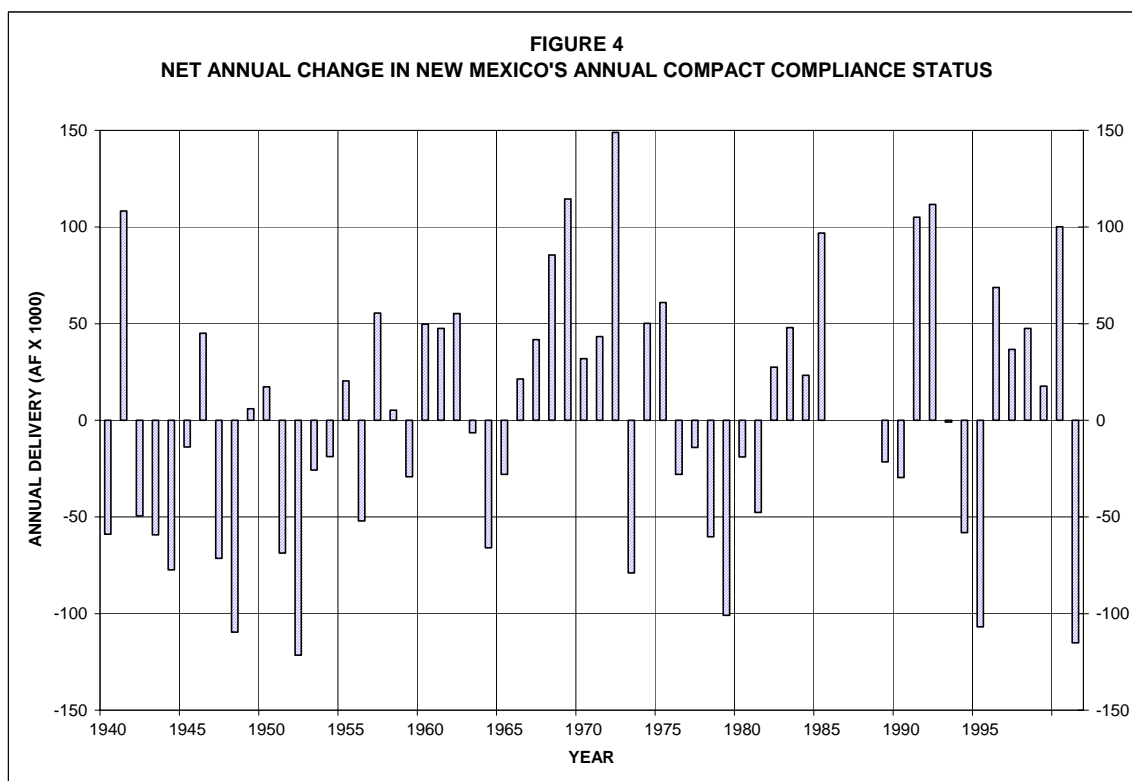
New Mexico historically has had a difficult time complying with the Compact, as shown in Figure 3. It was not until the implementation of a deliberate management strategy in the 1950s, in partnership with the Federal government, based on the control of excessive natural depletions New Mexico began to turn the corner on long-term Compact compliance. That strategy has included control of excessive evapotranspiration by exotic riparian vegetation, construction and maintenance of drains to salvage water that otherwise would be lost to evapotranspiration, river channel maintenance, and construction and use of both temporary and permanent man-made channels to efficiently convey water downstream. These activities are essential, particularly in the reach between San Acacia and Elephant Butte Reservoir, to ensure that New Mexico continues to meet its Compact delivery obligations. Figure 4 shows the net annual change in New Mexico's historical compliance with the Compact.



Program Use of Compact Delivery Water

Taking into account New Mexico's Compact delivery obligations to Texas, the middle Rio Grande basin is fully appropriated. That means that there is no excess water available beyond that which is currently being depleted from the system. Any additional or new use of water in the basin must come from an existing use. Depletions associated with specified endangered

species flow requirements below San Acacia are a new use on the system that must come from an existing use.



New Mexico Compact delivery water could be used to meet those flow requirements by storing that water during times when flows are in excess of that required to satisfy the diversion demands of downstream permitted water users. Essentially, such storage would occur during the snowmelt runoff period or during the winter months. That water would then be released in later months when there is insufficient flow to meet both the diversion demand of the permitted water users and the specified flow requirements of the endangered species.

Those specified flow requirements were partially met in 2001 and 2002 by New Mexico Compact delivery water released from the Middle Rio Grande Endangered Species Conservation Pool (Conservation Pool)¹. The Conservation Pool was temporarily established by the State of New Mexico as a proposed settlement offer to on-going litigation under the Endangered Species Act (Cause No. 99-CIV-1320, styled *Minnow v. Keys*) filed in the United States District Court for the District of New Mexico in 1999. The goal of the state was to provide short-term compliance with the ESA with the hope that the Middle Rio Grande ESA Collaborative Program Workgroup would be able to formulate long-term solutions. In temporarily establishing the Conservation Pool, the state fully recognized the hydrologic realities and limitations on water supply in the middle Rio Grande and thus limited its term to three years (through 2003).

¹ "Report to the Rio Grande Compact Commission Engineer Advisers on 2001 Operations of the Middle Rio Grande Endangered Species Conservation Pool," 2002, Joint Report of the New Mexico Interstate Stream Commission, US Bureau of Reclamation, and US Army Corps of Engineers.

New Mexico Compact delivery water could be temporarily stored during the winter and snowmelt runoff period (when natural evapotranspiration demand is fully satisfied) for later release during low-flow periods (when natural evapotranspiration demand is not met), results in additional evapotranspiration depletions on the system. Since the middle Rio Grande basin is fully appropriated, those additional depletions on the system can only come from an existing use. Since no existing uses would be curtailed, the result of such a plan would be the eventual violation of the Compact by New Mexico.

Thus, it is concluded that the sustained use of Compact delivery water to meet specified flow requirements for endangered species is not viable. In addition, the New Mexico Interstate Stream Commission will not consent to such a plan.

Program Use of Accrued Compact Credit Water

Under the Compact, New Mexico currently has an accrued credit of 155,700 acre-feet. That credit is physical wet water currently held in storage in Elephant Butte Reservoir that theoretically could be used in the short term to meet specified flow requirements for endangered species upstream in the middle Rio Grande. To make that water available for use in the middle Rio Grande would require either:

- a) the consent by resolution of the Compact Commission to move that credit pool to upstream storage, by exchange, for subsequent release and depletion, or
- b) relinquishment by New Mexico, and acceptance by Texas, of accrued credits pursuant to Article VII of the Compact.

Both options (a) and (b) are theoretically possible in the short term, but are clearly unsustainable in the mid- or long-term. While such a resolution as contemplated in option (a) is theoretically possible, it is highly unlikely given the current political climate and drought conditions of the basin (particularly in regards to basin-wide reservoir storage). In addition, the Compact contains no such provisions for performing such an exchange. Thus, the precise Compact accounting details necessary to accomplish that exchange are unclear, and represent a clear impediment to accomplishing such an action.

Both options have potential long-term detrimental ramifications. The history of New Mexico's Compact compliance clearly shows that, as the framers of the Compact intended, that the purpose of such accrued credits is to offset debits over the long-term. Accrued credit water owned by the state of New Mexico must be managed to benefit the entire state, and, in particular, the citizens and water users of the middle Rio Grande valley. Mismanagement of such accrued credit could potentially result in rapid violation of the Compact by New Mexico. The Interstate Stream Commission has an obligation to determine how best to use that credit water and is extremely reluctant to enter into a shortsighted plan that would deplete that credit and subject the state to potential Compact violation and ensuing litigation in the US Supreme Court.

Thus, it is concluded that the use of accrued New Mexico Compact credits to meet specified flow requirements for endangered species for anything other than the immediate short-term is not viable.

Summary and Conclusions

1. The middle Rio Grande basin is fully appropriated.
2. Any new use of water, such as the depletions that result from specified endangered species flow requirements, must come from some current existing use.
3. The sustained, long-term use of Rio Grande Compact delivery water to meet specified flow requirements for endangered species would cause additional depletions on the system that would result in the eventual violation of the Compact by New Mexico, and is not a viable option.
4. The use of Rio Grande Compact accrued credits to meet specified flow requirements for endangered species is not considered to be a sustainable option.